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OPERATIVE INTERFERENCE IN AGGRAVATED INSTANCES OF SEMINAL VESICULITIS.*

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IN the book I wrote last year † I made a careful review of the literature relating to surgery in connection with the seminal vesicles.

At that time I had not personally employed the knife as an aid in effecting a cure in any of my cases. Since then, however, I have obtained in this field operative results which have been alike gratifying both to my patients and to myself.

Aspiration of the seminal vesical, incision and drainage, and extirpation have been the surgical measures adopted in this connection.

In commenting on these procedures, I have condemned aspiration on the ground that any purulent condition of the seminal vesicle sufficiently uncomplicated to end in resolution after such an operation would recover in like manner without it. I have considered incision and drainage to be proper and essential in some inflammations, either acute or chronic, in which the suppurative process has extended beyond the limits of the seminal vesicle and invaded the perivesicular tissues. As regards extirpation I have said: "Most, if not all, the reported extirpations were undertaken for the removal of localized tubercular disease. The author, as has been stated, much prefers, as a rule, conservative methods in regard to cases of this nature, and would advocate

* Read at the June, 1896, meeting of the American Association of Genito-Urinary Surgeons.

† Disorders of the Male Sexual Organs, Lea Bros. & Co., Philadelphia, 1895.



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extirpation only in instances where hygienic and tonic methods have failed or bid fair to fail. If malignant disease can be detected while still confined to this part, extirpation would, of course, be called for, in which case Rydygier's method would be advised as probably giving the best opportunity for careful investigation and thorough extirpation. Purulent perivesiculitis and disorganized conditions of the vesicle as might result from such inflammations or from calculi, from benign growths, and from traumatisms, might also be causes sufficient to demand extirpation of the vesicle."

Although at the present time I hold largely to the opinions I expressed a year ago, still my experience since then allows me to be more positive and authoritative. Among other things I know now just how difficult it is to remove *in toto* a seminal vesicle when it is the center of a mass of sclerous induration. Now also, instead of suggesting an operation on a seminal vesicle as a possible means of relief, I feel justified in urging such a procedure under certain conditions as a proper course to pursue in case a radical result is desired.

Routier, of Paris,* and Casper, of Berlin,† have lately written instructive articles on the treatment of prostatic abscess, so called, and of phlegmonous prostatitis. Although the prostatic source of the purulent collections in many of these cases can be doubted, as most abscesses in this region are really perivesicular, still the results obtained by these authors from their treatment is of interest. They both discuss the methods of giving vent to the pus. Routier considers that the rectal is generally to be preferred to the perineal route. To open the abscess *per rectum* he introduces a speculum and makes an incision in the spot which seems most available. He then washes out the cavity and leaves it lightly packed with iodoform gauze. He expects his cases after this procedure to leave the hospital cured in about ten days. Casper reports having opened such abscesses through the rectum eighteen times and through the perineum three times. He advises that these collections of pus should be opened as near the spot as possible at which they tend to point. Belfield has reported to me that on one occasion he has successfully drained a case of purulent seminal vesiculitis by means of an incision through the rectum. I have not as yet opened an abscess of this description by means of a rectal incision; still, in view of the results just quoted, I shall do so when a suitable opportunity presents itself. My operative experience has been in connection with extremely chronic non-tubercular cases

* *La Semaine Médical*, December 5, 1894.

† *Berliner klinische Wochenschrift*, May 27 and June 3, 1895.

of seminal vesiculitis, associated with which there has also existed a marked amount of sclerous perivesiculitis. The great majority of such cases yield gradually and satisfactorily to the stripping treatment I have advocated, and for these no treatment more radical seems necessary or advisable. To a small minority of them, however, the stripping treatment, for reasons to be considered, may not be applicable, and it is to these that I have applied radical surgical measures.

For its successful accomplishment in cases of this chronic class the stripping treatment requires that the patient should be subjected to its influence, intelligently administered, for six months to a year. Some can not meet such requirements. For such of those as have but few annoying subjective symptoms resulting from their disease, expectant treatment is advisable. To the remainder, however, who are crippled either mentally or bodily, or perhaps in both particulars, by their disorder any radical surgical operation which offers a chance for relief is warrantable and advisable. There are besides a small percentage of cases among those who faithfully submit to the stripping treatment with whom distressing subjective symptoms persist in spite of that treatment, and to such cases also the benefit of a surgical operation should be extended. In my present state of mind I should feel loath to advocate operative interference in cases of chronic tubercular seminal vesiculitis unless my object were largely to give vent to an associated collection of pus, thus anticipating the damage that might ensue from burrowing. For it would be impossible to eliminate the tubercular area in such a case, and then besides the extensive operative procedure which would be demanded to expose the disease would, in all probability, serve to extend the tubercular process and make it more general by debilitating the patient and by disturbing the surrounding tissues.

In extirpating the seminal vesicle the incisions which have been employed are the Zuckerhandl, the von Dittel, and the Kraske, or some modification of that latter incision such as was proposed by Rydygier. Occasionally a combination of two of these incisions has been found advisable. The descriptive accounts of the few operations which have been reported are meager. In practice on the cadaver it is an easy matter by means of the Zuckerhandl incision to reach and extirpate a normal seminal vesicle. In practice, however, where the conditions are pathological, the employment of that incision to reach the seminal vesicle has in my experience so many disadvantages that I have abandoned it. The pathway it affords is narrow and deep, and the arterial bleeding associated with its accomplishment is severe, since

large vessels are cut in a position where oftentimes they can not be readily secured; and when once the vesicle is reached in this manner pathological adhesions make it difficult or impossible for the operator by traction on the organ to bring it into reach, and most of the work of destruction has to be accomplished in a blind and unsatisfactory manner by the curette. My operative experience with this incision has been confined to two cases, in one of which I employed it in an attempt to reach a diseased seminal vesicle, but finally abandoned it for the Kraske incision; in the other I made use of it in closing a rectourethral fistula. Dr. Charles B. Kelsey, of New York (New York Medical Journal, February 15, 1896), has used the Zuckerhandl method on one occasion in my presence in extirpating a seminal vesicle and makes the following comment regarding it:

"The operation has been long, bloody, and unusually difficult. In another case I should keep to the Kraske incision, which, though it seems unnecessarily large, renders the operation much more precise and is attended by much less bleeding and risk of tearing the rectum as we have done in this case."

The von Dittel incision also does not afford sufficient space. By its employment the prostate can be exposed, but in order to lay bare the seminal vesicle a higher cut, such as the Kraske, is required. In fact, the Kraske is the incision to be employed if the object of the operator be to extirpate the seminal vesicle. By means of this incision the seminal vesicle, the prostate, and the base of the bladder can be exposed freely and in a manner which permits the operator definitely and precisely to accomplish his purpose. The wound, to be sure, is extensive, but it must be borne in mind that the organ to be reached is deeply situated, and that the rectum has to be displaced before it can be exposed. The operation, however, is not bloody. A few good-sized vessels are cut, but their position is such that they can be readily and easily ligated. The operation is not particularly easy, and one has to know his anatomy well. Care has to be exercised not to wound the rectum, the base of the bladder, the ureter, or the peritoneum. The Kraske, being partially a lateral incision, of course exposes but one seminal vesicle. In order to expose both organs, incisions along either side of the lower portion of the sacrum would be required. I have not found it necessary, in doing the operation, to extend the incision up to the posterior superior spine of the ilium in order to acquire the requisite space, an incision the upper limit of which was opposite the middle portion of the sacral border having been sufficient. In unilateral cases, if the coccyx is not ankylosed to the sacrum, it is not usually neces-

sary to remove that bone, retractors laterally applied affording sufficient space. Rydygier's modification of Kraske's incision, which consists of a cut from the lateral sacral incision across the sacrum, just below the third sacral foramen, thus allowing a triangular flap of tissue and bone to be turned up in order to get a large amount of extra space, would, it seems to me, be necessary only in case one were dealing with a neoplasm or some condition requiring great exactness in the detail of extirpation.

My practice also on two occasions after completing the operation on the seminal vesicle has been to secure rest for the bladder by the introduction through a boutonnière perineal incision of a drainage tube. This arrangement has so far proved satisfactory. It may not, however, be necessary. It may be that a catheter tied in the urethra will be sufficient, or it may be that the bladder will be found to be capable of performing its function unaided. These are points, however, which I hope to settle to my own satisfaction from further experience.

The histories of the two cases I have to relate are as follows:

Case 1.—Thirty-six years old; longshoreman. First seen by me in the spring of 1895. He was then unable to work, and for the last five years he had been able to do little at his calling, owing to a pain in his right suprapubic region, which always became intensified as the result of any active effort such as his work called for. Seemingly connected with this suprapubic pain there existed a desire to urinate, and this desire to urinate closely corresponded in its intensity with that of the pain. When his suprapubic pain became acute his urination became frequent and urgent; so much so, in fact, that at times he lost all control over that function. He was sexually weak. On attempting coitus his ejaculation was premature and painful. The act was followed also by an increase in his suprapubic pain. All these subjective symptoms had followed a gonorrhœa. That gonorrhœa had apparently been hard to cure. It had persisted as a gleet for a long time and on various occasions a relapsing discharge had appeared, especially after free indulgence in beer. His urine was as a rule clear and normal, with the exception of a stray shred. After one of his painful attacks, however, associated with tenesmus, it would contain some free pus. For his chronic symptoms he had sought relief at the hands of many surgeons. He had been searched for stone on numerous occasions, with negative results. He had been cut for stricture and dilated with sounds, all to no purpose. In fact, the treatment he had received had, as a rule, aggravated rather than relieved his condition. When he came under my observation I examined him most carefully and

diagnosed his trouble as a chronic seminal vesiculitis, confined almost wholly to the right sac. The rectal feel showed a hard tumefaction posterior to the prostate occupying the region of the right seminal vesicle. It was evident that the sac itself was imbedded in a mass of perivesicular sclerosis. Pressure on this tumefaction intensified the suprapubic pain and caused a thick pasty fluid of a brownish color to exude from the ejaculatory duct into the urethra. This fluid on microscopical examination was found to be from the seminal vesicle. The discoloration was due to blood pigment. A systematic stripping of the seminal vesicle was tried and the patient improved; but the sclerous mass was so extensive that I decided in October, 1895, to make a trial of extirpation of the seminal vesicle in order to hasten a cure. I first attempted to accomplish my purpose by employing the Zuckerhandl, the transverse perineal incision, but for the reasons already mentioned I abandoned it. In my attempts, however, through this narrow incision to bring down the sclerous mass into reach I tore the wall of the rectum. This same accident occurred at a later date to Kelsey in connection with his case, reference to which has already been made. To get more working space I then carried my incision (the patient lying on his belly with his buttocks elevated and his thighs bent downward) upward around the right border of the rectum and toward the coccyx. In other words, with my original transverse perineal incision I combined the von Dittel incision. Even then, however, I did not obtain sufficient space, and accordingly I extended the upper end of the last incision upward to the right of the coccyx and sacrum, its upper limit terminating opposite the middle portion of the right sacral border. This last cut, which was nothing more or less than the Kraske incision, afforded the required working space and showed my original transverse perineal as well as the lateral rectal incision to have been unnecessary. I now pushed the rectum to the left and exposed the sclerous perivesical mass, through which I made a longitudinal incision exposing the seminal vesicle along its entire length. The seminal vesicle, however, was so firmly imbedded in this mass that it was impossible to dissect it out with any precision. I accordingly snipped out as much of the organ as I could with curved scissors, finishing the work of removal with a sharp curette. The outlying sclerous mass I did not disturb for fear of injuring the ureter or peritoneum. I then successfully sutured the wound I had accidentally made in the rectum during the early part of the operation. My next step was to insert a long drainage tube at the upper, sacral, end of the incision, and pass it down through the space from which the seminal vesicle was extirpated and

out again beside the rectum. Around about the tube, to prevent oozing, a light packing of iodoform gauze was placed, and then the external cutaneous flaps were brought into proper apposition by silkworm-gut sutures. He was next put on his back in the lithotomy position and a boutonnière perineal incision made in order to make sure that no after trouble might occur from retention of urine. The patient made a rapid and highly satisfactory recovery and left the hospital at the end of three weeks and a half. At that time he complained that on moving about his urine would come away from him involuntarily, unassociated, however, with the old-time, right-sided, suprapubic pain. His extensive cicatrix was tender, causing him some pain when he sat down. Sinuses persisted, marking the position occupied by the drainage tube. He had no sensations of erection and felt that he was entirely impotent. All these symptoms proved to be associated with the after effects of the operation. They gradually became less and less and in February, 1896, over four months after the operation, the man reported well. He was then working hard alongshore. He had no pains. He could hold his urine naturally. His sexual power was strong and satisfactory and he reported that he was making liberal use of it. Digital rectal touch showed that the mass of sclerous perivesiculitis had disappeared.

Case II.—Forty-five years old; a cab driver. First seen by me in December, 1895. He was then depending entirely on a catheter, having been unable to pass a drop of urine naturally for over a year—ever since, in fact, he had undergone an external urethrotomy. His bladder was foul and his general condition bad, owing largely, as he expressed it, to attacks of chills and fever, which came as the result of exposure to cold or of physical exertion. He was married and the father of children, but within the last two years he had rarely attempted sexual intercourse, owing largely to disinclination and feelings of weakness, and when he had performed the act it was unsatisfactory and followed by pain and a lingering local distress. A large-sized sound slipped into his bladder easily, demonstrating that no stricture existed. The finger in the rectum showed what at first one might readily have diagnosed as extensive prostatic hypertrophy. The age of the patient, however, was against this, and the mass was very tender to pressure, a symptom not usual with simple hypertrophy. On careful investigation with the finger, however, I felt sure that the tumor was made up of an inflammatory exudation, which was focused about the right seminal vesicle. Palpation over the kidney region showed some tenderness, especially on the right side, and that, to-

gether with the history of chills and fever during the last year, made me suspicious that one or both of the renal pelves had been more or less involved by an ascending infection due to the chronic retention and the neglect of vesical antisepsis. The urine was alkaline or at best neutral. It contained much pus and bladder epithelia and some albumin, but as there was oftentimes a little blood present it was not safe to assume that the albumin was due to renal involvement. The patient stated that he had considered himself well with the exception of a moderate degree of sexual weakness till something over a year before, when he was suddenly seized with retention of urine. At that time he had been forced to remain on his box for a long time with a very full bladder before an opportunity had offered itself for him to urinate. The day was also very cold. A doctor was called and a catheter employed. He was then sent to a hospital and a perineal section performed and, as he stated, a stricture cut. He stayed in the hospital over two months. His bladder after the operation was drained for three weeks. After the perineal wound healed he was never able to pass any urine. The operation the patient thought afforded him no benefit and evidently did not reach the source of his trouble.

I determined to remove the post-prostatic perivesicular mass on the right side by means of a Kraske incision, in order to secure free and permanent vesical drainage. The patient was accordingly etherized and placed on his belly with his buttocks elevated, his thighs being allowed to hang down. The incision was made and the mass exposed. In this instance, owing to the rigidity of the coccyx, I dissected out and removed that bone. I made a longitudinal incision through the sclerous mass, as in the first case, and exposed the imbedded seminal vesicle, to which I then vigorously applied a sharp curette, thus removing the greater portion of the organ. I also made a boutonnière perineal incision, through which I introduced a catheter to insure bladder rest. In performing the operation the prostate was openly exposed, and it is interesting to note that it appeared perfectly normal in size and otherwise. The patient did well after the operation. The perineal vesical tube was removed at the end of a week and the perineal incision closed before the end of the fourth week. On the closure of the perineal wound the natural function of micturition returned just as in Case No. 1. Although he could hold his urine perfectly while lying down or resting, he found that his control over it was imperfect when moving about. This was also the complaint that Case No. I made for a month or so after leaving the hospital, at the expiration of which time the annoying symptom in his case entirely disappeared.

At the end of five weeks the patient was discharged from the hospital. His Kraske incision had healed with the exception of a small sinus, for the dressing of which he could be treated outside. During all his stay in the hospital a large amount of diuretic water had been prescribed in order to correct, if possible, the renal and vesical conditions which had resulted from the previous retention, and when he left his urine was clear and free from albumin. The renal tenderness had also disappeared. The patient reported very irregularly after being discharged from the hospital, and at the end of about a month I learned that he was laid up sick in bed. I accordingly visited him to investigate his condition. I found him feverish and very tender in both loins, but especially on the right side. After leaving the hospital he had stopped his diuretic water and had slept in a cold room with few comforts. About a week before my visit he had caught a cold, which had been followed by suppression of urine, and since that time it had been scant, high-colored, and loaded with pus. I examined a specimen which I took away with me, and found that it presented all the evidences of pyelitis. Digital rectal feel showed an entire absence of the original post-prostatic tumefaction. He emptied his bladder naturally, although the act of micturition had been very frequent since his attack of pyelitis. A small sinus still persisted near the middle of the Kraske incision. I offered to send him back to the hospital, and if necessary to do a nephrotomy to correct his pyelitis. He refused this proposition, and what the outcome of his case will be I do not know. Still, as far as the seminal vesicular operation is concerned, the case is certainly very successful, and had his position in life been different it is highly probable that nothing would have occurred to have prevented his kidneys entirely recovering from the damage they had sustained from the long-standing vesical retention.

From the foregoing operations the following conclusions can be drawn:

1. Chronic non-tubercular cases of seminal vesiculitis can be successfully and satisfactorily treated by extirpation of the sac.
2. Such an extreme measure, however, should be reserved for extreme cases associated with serious or severe subjective symptoms.
3. Before resorting to extirpation the patient should have the benefit of the stripping treatment, if his circumstances allow it, and extirpation should be advised only in case the stripping treatment proves unsatisfactory.
4. In performing the operation the Kraske incision is the method advisable.

5. The subjective symptoms associated with the seminal vesiculitis ought to disappear as a result of the operation.

6. With but one seminal vesicle, provided that organ is in itself healthy, the sexual function is strong and satisfactory.

7. A subacute epididymitis is to be expected after the operation in connection with the testicle corresponding to the seminal vesicle which has been removed. The testicle itself, however, does not subsequently atrophy.



